AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

SEARCHING FOR THE SILVER BULLET:

COERCION MECHANISMS AND AIRPOWER THEORY

by

Robert S. Ehlers, Jr., Major, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Mr. Budd A. Jones, Jr.

Maxwell Air Force Base, Alabama

April 2002

		Form Approved
Report Documentation Page		OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **00 APR 2002**	2. REPORT TYPE **N/A**	3. DATES COVERED **-**	
4. TITLE AND SUBTITLE **Searching For The Silver Bullet: Coercion Mechanisms And Airpower Theory**		5a. CONTRACT NUMBER	
		5b. GRANT NUMBER	
		5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)		5d. PROJECT NUMBER	
		5e. TASK NUMBER	
		5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Air University Maxwell Air Force Base, Alabama**		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)	
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release, distribution unlimited**			
13. SUPPLEMENTARY NOTES			
14. ABSTRACT			
15. SUBJECT TERMS			

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT **UU**	18. NUMBER OF PAGES **39**	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**			

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Disclaimer

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Contents

Preface

This paper examines air coercion, a strategy of increasing importance to the Air Force and other Services. Although a number of scholars have begun to reexamine coercion strategies in some detail, to include theory and its application in historical case studies, there are two key weaknesses in the existing literature. First, despite much recent attention, air coercion is still poorly defined, and the term itself is too often misused by scholars. Second, there has not been enough study of specific coercive mechanisms and how air campaigns have sought to influence them. This paper addresses these two shortcomings, giving those who advocate and employ airpower a better understanding of air coercion, its effective application, and its limitations.

I would like to thank Mr. Budd Jones, my Air Command and Staff College faculty research advisor, for the superb assistance and insights he provided. He helped me to conceptualize and put appropriate boundaries around an exceptionally complex yet important topic. I also owe a debt of gratitude to the small but growing group of air coercion theorists who have had the academic and moral courage to engage with such a difficult topic, and from whose studies I have profited in crafting this paper. Any disagreements I have with their views are meant not as criticism, but rather as a means of refining our collective thinking about air coercion.

AU/ACSC/036/2001-04

Abstract

This paper examines air coercion, a strategy of increasing importance to the Air Force and other Services. Although a number of scholars have begun to look at air coercion strategies in some detail, to include theoretical underpinnings and application in historical examples, two key weaknesses persist in the existing literature. First, despite much recent attention, air coercion is still poorly defined, and scholars too often misuse the term or try to apply it where it should not be applied. Second, there has not been enough study of specific coercive mechanisms and how airpower strategies influence them. *Mechanisms are the means by which attacks on various targets, such as fielded military forces, economic infrastructure, and public opinion, translate into coercive leverage against adversary leadership.* To fill these gaps in the current scholarship, this paper defines air coercion and discusses briefly the kinds of armed conflicts in which it may or may not succeed. From there, it addresses the issue of coercive mechanisms in some detail, including an appraisal of their importance and utility to air campaign planners. Finally, it assesses the effectiveness of air coercion in two historical case studies: the air pressure campaign in the closing months of the Korean War and Operation Deliberate Force, flown against the Bosnian Serbs in 1995.

Key findings, illustrated in these case studies, demonstrate that air coercion must target the proper adversary mechanisms in order to coerce adversary leadership in an effective manner. It is critical to understand that each conflict is unique. Finding the

right mix of targets for a particular conflict, and then impacting them effectively in order to trigger coercive mechanisms, is a key prerequisite for success. When contemplating coercive strategies, it is also crucial to have a deep understanding of adversary leadership. To succeed, air coercion must *influence adversary leadership* to do the things we want them to do. Otherwise, coercion strategies will be ineffective. Consequently, to determine the best means by which to influence adversary leaders, air campaign planners must have a good understanding of what those leaders *value and fear the most*. Once this becomes clear, it is then necessary to choose the proper targets and determine how attacking them will produce coercive leverage. The specific process by which striking a given target translates into coercive leverage constitutes a coercive mechanism. For example, to compel Saddam Hussein to withdraw from Kuwait, Coalition forces targeted his Republican Guards. Attacking these elite units, which are the foundation on which Saddam's power rests, increased his fear of being ousted. The coercive mechanism at play was *increasing Saddam's fear of losing power by attacking his Republican Guards*. This understanding of coercive mechanisms is central to the development and successful execution of air coercion strategies, as case studies in later chapters illustrate.

It is also clear that military leaders must integrate air coercion strategies effectively with other national instruments of power. An air coercion effort carried out in isolation from diplomatic, economic, and information elements of national power is very unlikely to succeed. The case studies presented below make this abundantly clear. Finally, it is also worth noting that if a coercive effort does not conform to overarching policy objectives, it will fail, regardless of how brilliantly it is otherwise conceived.

Chapter 1

Defining Air Coercion

War should never be thought of as something autonomous but always as an instrument of policy…The first, the supreme, the most far-reaching act of judgment that the statesman and commander can make is to establish by that test the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the first of all strategic questions and the most comprehensive.

—Carl von Clausewitz

Why Coercion Matters

Over the past 50 years, the Armed Forces of United States have waged a number of undeclared wars around the world. These conflicts, though unique in their character and circumstances, had one thing in common: For reasons of policy and strategy, our political leaders placed limits on both their ends and means. These limitations derived initially from the Cold War and the attendant fear of nuclear holocaust. However, limited wars and carefully proscribed military operations, with their great complexity and potential frustration, remain the norm even in the wake of the Cold War.

One of the key issues air strategists must consider in this new age of limited war is the proper role of airpower and, more specifically, scenarios in which air coercion strategies can help to achieve policy objectives. In the wars America has fought since 1945, airpower has played a central if not always effective role. Air coercion strategies have been a prominent feature in several cases. Indeed, political leaders have relied

1

increasingly on air coercion strategies since the end of the Cold War. Policymakers view airpower as faster, less expensive in blood as well as treasure, and increasingly capable of producing the decisive results seen in both the Gulf War and the Balkans. When combined with the complexities of today's global environment, this growing reliance on air coercion makes a clear understanding of its capabilities and limitations a matter of the utmost importance. For military leaders, this is critical because it must drive how they organize, train, equip, and employ forces to carry out coercion strategies, which in turn makes clear a need for joint and Service doctrines that incorporate air coercion.

The Strategic Environment

In this new age of limited war, political leaders are often faced with complex crises where something less than the maximum use of force is the only viable option. Several factors have combined to make limited wars the norm since 1945. During the Cold War, fear of nuclear conflict played a major role. Yet since the end of the Cold War, five other factors have become prominent. Perhaps the key factor driving a preference for limited wars is the *strategic environment* itself, in which the United States is the predominant power. The absence of a peer competitor makes total war unlikely in the near future. Consequently, the ends sought and means employed tend to be limited. This is particularly true in smaller conflicts where less-than-vital national interests are at stake. Also, with the artificial stability of the Cold War a thing of the past, older animosities, based on cultural factors such as ethnicity and religion, have emerged once again as serious threats to regional and global stability, often driving US involvement. *Cost* is the second factor. The expense of waging modern war results in an imperative to limit the scope, duration, and intensity of armed conflicts. Third is a *decreased tolerance*

for casualties, particularly in cases where the United States and its allies are pursuing less-than-vital national interests. Even the current "war on terrorism" is noteworthy for its emphasis on minimizing casualties and collateral damage. This unwritten requirement often drives political leaders to choose airpower as a coercive instrument in limited wars, believing it offers the best chance of providing decisive results with a minimum cost in casualties, collateral damage, and dollars. The fourth factor is *increased airpower effectiveness*. Precision-guided munitions, stealth, and intelligence, surveillance, and reconnaissance have combined with improved doctrine, tactics, and training to transform American airpower.[1] Finally, the changed strategic environment has resulted in a more restrictive use of force by Western democracies, a trend at odds with America's historical preference for wars in which superior productive capacity and firepower inflict decisive defeat on adversaries. Today's wars are often waged for limited ends, with limited means, making "victory," as defined in America's pre-Cold War experience, impossible.[2]

Defining Coercion

Effective air coercion strategies rely on a good understanding of what coercion means in the current global context. Coercion involves *deterring* an adversary from taking an action or *compelling* him to *do something in the coercer's best interests*. Clausewitz builds on this foundation when he says, "[I]f an enemy is to be coerced,"

> you must put him in a situation that is even more unpleasant than the sacrifice you call on him to make. The hardships of that situation must not of course be merely transient—at least not in appearance. Otherwise the enemy would not give in but would wait for things to improve. Any change that might be brought about by continuing hostilities must then, at least in theory, be of a kind to bring the enemy still greater disadvantages.[3]

This recognition that coercion must manipulate an adversary's decision-making calculus provides a point of departure for developing a useful definition of air coercion.

In the current global context, most scholars agree that *coercion involves the threat of force, or the actual use of limited force, to induce an adversary to behave differently than it otherwise would in the absence of threatened or actual violence.*[4] Building on this, air coercion is best described as *the use of airpower to induce an adversary to behave differently than it otherwise would in the absence of air attack.* Yet these definitions fail to explain what "limited force" means or when coercive strategies are likely to succeed. Thomas Schelling takes the first steps towards addressing these shortcomings when he differentiates coercion from "brute force," which he defines as the maximum application of military force to defeat or simply to hurt an enemy. It is inflicted *without recourse to bargaining*. He argues that "to be coercive, violence has to be anticipated. And it has to be avoidable by anticipation. The power to hurt is bargaining power. To exploit it is diplomacy…"[5] Schelling also recognizes that for coercion to succeed, our interests and those of our adversaries must not be diametrically opposed. There has to be some common ground for negotiation.[6] This raises a question: If there are instances in which coercion might be a useful strategy, are there also conditions in which it is *not useful*?

Schelling says coercion can succeed only if common ground exists. Yet he tells us little about instances in which it is not useful. Bernard Brodie provides useful insights here. He reminds us of Clausewitz's dictum that war must not be separated from political intercourse lest it lose its rational character.[7] By extension, it is *only when political interaction stops* that coercion is no longer a useful strategy. Using this criterion, three

types of conflict merit our attention. The first is when adversaries have differences so great that they have no wish to negotiate. The Second World War is a case in point. Allied and Axis ideologies and visions of the post-war world were so completely opposed as to preclude meaningful dialogue. The second is when there is no clearly stated strategic object from the outset, making meaningful negotiations, and thus coercion, very difficult. The First World War, in which the great powers did not know exactly what they wished to accomplish, is such a case. The third case includes instances where a coercer attacks targets that fail to trigger coercive mechanisms and thus do not provide coercive leverage. In Allied Force, NATO sought to compel Serb leaders to stop ethnic cleansing of Kosovar Albanians by attacking Serb fielded military forces. Yet rough terrain, poor weather, and restrictive rules of engagement made this impossible, so NATO air strikes failed to generate coercive leverage until they moved to other targets.

Equally important is recognizing that *although coercion is most appropriate for limited conflicts, it can also be effective in cases where means are nearly total*. The Korean War experience shows that air coercion can work in high-intensity conflicts. It also makes clear the importance of *choosing the right coercive mechanisms*, which is the subject of the following chapter. Case studies in Chapters 3 (Korea) and 4 (Bosnia) then illustrate how *choosing proper targets to trigger coercive mechanisms* can produce decisive results, demonstrating why air coercion is critical in this new age of limited war.

Notes

[1] See Benjamin S. Lambeth, *The Transformation of American Airpower* (Ithaca, NY: Cornell University Press, 2000), 298, for a good summary of airpower's increasing effectiveness.

[2] See Nancy McEldowney, "Kosovo: Redefining Victory in an Era of Limited War." Washington, DC: National Defense University, National War College, 2000, for a detailed review of this development.

Notes

[3] Carl von Clausewitz, *On War* (Princeton, NJ: Princeton University Press, 1976), 77.

[4] Byman, Daniel L., Matthew C. Waxman, and Eric Larson, *Air Power as a Coercive Instrument* (Santa Monica, CA: Rand Corporation, 1999), 10.

[5] Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966), 2.

[6] Ibid., 4.

[7] Bernard Brodie, *War and Politics* (New York: MacMillan Publishing Co. Inc., 1973), 9.

Chapter 2

Coercive Mechanisms

Military strategy can no longer be thought of, as it could for some countries in some eras, as the science of military victory. It is now equally, if not more, the art of coercion, of intimidation and deterrence. The instruments of war are more punitive than acquisitive. Military strategy, whether we like it or not, has become the diplomacy of violence.

—Thomas Schelling

Coercive Mechanisms in the Strategic Context

As noted previously, coercive mechanisms are the means by which attacks on various targets translate into coercive leverage against adversary leadership. Despite the importance of choosing proper coercive mechanisms for air coercion strategies, little has been written about why and how coercive mechanisms work well in one case but not in another. Robert Pape made this clear when he said, "mechanisms by which military effects are supposed to translate into political results are hardly ever studied."[1] He says we must seek to understand why and how targeting a certain mechanism produces effects that compel an adversary to do our will. Colonel Robert Owen echoes this key point:

> Missing is any discussion of how actions taken will produce the expected results. That is, if the *strategy* occurs, then the *ends* likely occur because of a certain *mechanism*. It specifies the theoretical foundation for the strategy. For example, the mechanism for Deliberate Force could have taken the following form: 'If force is applied to critical communications facilities of the Bosnian Serbs, then they will accede to UN demands because the *loss of these communication facilities will result in a loss of control over their forces*.[2]

This question of choosing appropriate mechanisms, which receives much attention in succeeding chapters, is at the heart of developing effective air coercion strategies.

Pape made the latest comprehensive effort to clarify how and why air coercion might be an effective means of triggering coercive mechanisms to influence adversary decision-makers. He believes that matching a coercion strategy to a target state's specific vulnerabilities is the key to success.[3] Pape identifies four possible air coercion strategies—punishment, risk, denial, and decapitation—employed from the Second World War to the present.[4] Punishment involves bombing civilian populations in an effort to undermine their morale and convince adversary leaders to sue for peace. Risk strategies entail graduated and measured increases in coercive pressure to force compliance with the attacker's demands. Denial involves defeating an adversary's fielded forces, and hence his military strategy, making it impossible for him to achieve his objectives. Finally, decapitation seeks to kill enemy leaders or trigger a coup that replaces them with a more conciliatory regime. Pape argues that denial is the most effective strategy.[5] Yet denial does not always work in practice, nor does it provide a sound analytical basis for designing all air coercion strategies, as will become clear later.

Pape's typology of air coercion strategies, while an important point of departure, has shortcomings. His punishment strategy is not a realistic option in today's global environment, given the unwillingness of Western democracies to target civilians. Pape's risk strategy suffers from similar weaknesses. He says risk strategies, such as the Rolling Thunder air campaign against North Vietnam, seek to influence opponents by inflicting increasing pain and damage, over time, until they concede. He ends by stating that risk is not an effective strategy. The problem here is twofold. First, he restricts the influence

mechanisms affected by risk strategies to civilians.[6] As noted earlier, targeting civilians

is not currently an option. More importantly, Pape makes risk a strategy in its own right,

attributing it to Schelling and defining it as a threat or use of escalating punishment.

However, Schelling's concept of risk is more expansive and sophisticated: He views it as

the motor that drives and thus defines *all* coercion strategies. Consequently, the term and

its implications, as Pape employs them, are both inaccurate and unduly restrictive.[7]

Pape believes the third strategy—denial—is most effective.[8] He defines denial as

targeting an enemy's fielded forces to defeat his military strategy, pointing to Desert

Storm as a key example.[9] By targeting Iraqi fielded forces, he says, the Coalition

compromised Saddam Hussein's grand strategy.[10] The success of Coalition air strikes

against Iraqi fielded forces, and the rapidity with which those forces collapsed once the

Coalition ground offensive began, lend credence to Pape's argument. Yet denial does not

always work. During Allied Force, the NATO air campaign sought to stop Serb ethnic

cleansing in Kosovo by attacking fielded forces, thereby defeating the Serbs' military

strategy. In this it failed utterly and in fact caused intensified ethnic cleansing. NATO

leaders had to find other coercive mechanisms by which to influence Serb leadership.

Although debate continues about why Milosevic gave in, it is apparent that re-focusing

the air campaign on *influencing adversary leaders*, combined with the growing threat of a

ground campaign, led to NATO's victory. Influencing adversary leadership is of central

importance to air coercion, making Pape's analysis of decapitation all the more puzzling.

Pape divides decapitation into three subcategories: leadership decapitation (killing

leaders); political decapitation (creating conditions in which opposition groups can

overthrow the government); and military decapitation (cutting C2 nodes to isolate leaders

from fielded forces).[11] Despite the fact that he gives decapitation much attention, Pape says it is not an effective strategy.[12] This misses the mark in several ways. First, Pape limits decapitation to strategies that seek to remove adversary leaders from power or, in the case of military decapitation, to isolate them from fielded forces, leading to military defeat or overthrow. This restrictive definition makes decapitation difficult for a coercer to bring about. Indeed, outside of a "lucky hit," decapitation, as Pape defines it, cannot succeed. More importantly, it overlooks the key issue: that *influencing adversary leaders*, rather than trying to kill or depose them, may be a particularly lucrative strategy.

Decapitation is an inflexible concept of little value. Of paramount importance to the issue of air coercion, it ignores the fact that *adversary leadership is by definition the primary thing we must seek to influence in every air coercion strategy*. All other targets, including fielded forces, civilian morale, and economic infrastructure, are useful only to the extent that attacking them helps to influence adversary leaders. Coercion is by definition *a process of bargaining with adversary leaders*. They are therefore, in the context of coercive strategies, always the center of gravity. In this sense, it is reasonable that most policymakers are reluctant to approve strategies designed to kill adversary leaders. Doing so would either leave nobody with whom to bargain, or perhaps facilitate the rise of even more intransigent leaders, both of which would defeat the purpose of coercion. Such strategies are therefore *not* coercive. A more sophisticated analytical construct than decapitation is necessary. *Leadership influence* is a far better concept for developing strategies that exert maximum coercive leverage on adversary leaders.

Leadership Influence: The Primary Focus of Coercive Mechanisms

Leadership influence has as its foundation a critical question strategists must ask at the outset: What do adversary leaders *value and fear* the most?[13] Only by answering this key question can strategists develop effective air coercion strategies. Coercive strategies seek to influence human beings, who are not always rational actors (at least not from our perspective), and who may not do exactly what we expect them to do. This uncertainty makes it impossible to prove empirically that coercion strategies will have all the anticipated outcomes. Indeed, there are situations, such as the Soviet Union's experience in Afghanistan, in which influencing adversary leaders effectively from the air simply may not be possible. Still, they are often vulnerable to coercion, and to gain the maximum leverage over them, we must begin by asking *what enemy leaders value and fear*, and build the best possible strategy, based on this question, to coerce them.

This idea of focusing on what leaders value and fear has its genesis in the value targeting concept. This methodology provides a means for choosing targets to maximize the enemy leadership's fear, and erode their influence and popular support, by striking those things they hold dearest.[14] The idea here is simple, but dramatically effective: Strike enemy leaders where it hurts most, threaten the bases of their power, and alienate their key supporters. Despite its clear promise as a coercive strategy, this leader-centric focus has received little attention to date. Determining targets of value to enemy leadership requires careful analysis and provides the basis for identifying coercive mechanisms. It is critical to remember here that *coercive mechanisms are the means by which attacks on targets translate into coercive leverage against adversary leadership*. Viewed in this light, key targets that might influence leaders include the underpinnings of

their power (the military and internal security organs), the means by which they exercise power (including the media), and their personal assets. Equally important is to know who their key supporters are, and to target items of value to them as well.

The next step is to determine *how* striking these targets will translate into coercive leverage; in other words, *identifying specific coercive mechanisms*. Mechanisms are as different as the leaders they are designed to influence. As the next chapters illustrate, the air pressure campaign in Korea was designed to increase pressure on communist leaders by attacking things they valued, including cities, irrigation dams, trucks and locomotives supplying front-line forces, and other high-value assets leaders were reluctant to lose. Attacks on these targets were designed to make the costs of continuing the war too high for communist leaders to bear. Deliberate Force targeted the Bosnian Serb leadership's historically-based *fear* of domination by other ethnic groups by striking what it *valued* most: the military capabilities that underpinned its battlefield successes.[15] Attacks on Bosnian Serb military targets were thus designed to erode Serb fighting power, leaving them open to Croat and Bosnian Muslim counterattacks that would erase their previous gains, thus compelling them to agree to NATO demands. Finally, Allied Force targeted things of value to Milosevic and his cronies—homes, businesses, and dual-use economic assets in which they had interests—which played on their fear of losing wealth, privileges, and power. Coercive mechanisms included attacks designed to erode not only the political elite's support for Milosevic, but also that of the Serb public, a key worry for Milosevic given the public's political activism in previous years. In all three cases— Korea, Bosnia, and Serbia—it is also crucial to realize that air coercion succeeded only as part of a larger coercion strategy involving all available instruments of power. As will

become clear below, air coercion in Korea and the Balkans succeeded because it focused on leadership influence by targeting those things leaders valued and feared to lose.

Having established that adversary leadership should be the primary focus of air coercion strategies, and that other targets are secondary and valuable only to the extent that striking them triggers coercive mechanisms that produce leverage on adversary leaders, one key question remains: How can we be sure that air coercion will work as anticipated against a particular adversary leader? There is obviously no guarantee that adversary leaders will react to coercion exactly as we hope they will. In fact, it is more likely that they will react in a way we do not anticipate. Since Robert Pape's study, other scholars have broadened the body of knowledge surrounding coercion strategies, particularly regarding this question of how adversary leaders may respond to air coercion strategies. Two studies provide particularly important insights because they recognize the centrality of leadership influence in coercion strategies and analyze the range of responses we might expect from leaders targeted by air coercion.

The Heirs of Robert Pape

In the first of these two studies, Mark Sullivan analyzes Pape's denial strategy in concert with Joseph Engelbrecht's theory of second-order change, which holds that leaders often will not negotiate until something of greater value to them than the current conflict (and its objectives) is put at risk.[16] Engelbrecht sees three key ingredients in second-order change. The first is a failure of the adversary's military strategy and a consequent shift from the offensive to the defensive. From there, military defeats prompt leaders to shift their focus from winning the war to protecting higher-order values such as their political independence, cultural integrity, or the very existence of their country. The

13

final element is some sort of crisis or severe shock that puts these higher-order values at serious risk.[17] Sullivan's conclusion is that air coercion strategies must seek *both* denial and second-order change by defeating an adversary leadership's military strategy and *at the same time* putting at risk something they value enough to cause a second-order change.[18] In the first case, the enemy's military strategy becomes untenable; in the second, something the enemy values even more than military forces is put at risk. This can include political power, personal assets, or the ideological underpinnings of his society. In fact, it may include all three. Sullivan's view is that a successful air coercion strategy must include both denial and second-order change if it is to succeed. Air campaigns that have sought both denial and second-order change, such as Deliberate Force, lend weight to Sullivan's theory. However, as Allied Force made clear, achieving both denial and second-order change is not always feasible. Yet it also made clear that even an air campaign where denial does not work may still succeed by focusing instead on leadership influence. If air coercion convinces adversary leaders that the things they value most, including political power, are at risk, it will likely cause a second-order change, as Allied Force did with respect to Milosevic and the Serb political elite. This issue of maintaining a focus on *leadership influence* is at the heart of another coercion theory proposed by Jon Kimminau.

Kimminau provides further analytical insights when he argues that air coercion is not fundamentally about denial or second-order change, but rather about risk. He takes issue with Pape's definition of risk as a specific type of strategy, arguing instead that risk is the central factor in *all* coercion strategies.[19] Only by understanding the adversary leader's *risk tolerance* can we determine how best to coerce him. Kimminau proposes

prospect theory as the best tool for this, arguing that a leader's *perception* of his position of advantage or disadvantage—how he *frames* the problem—is a critical factor in determining how that leader will respond to air coercion.[20] Key here is his division of leadership perceptions—how a leader frames his current position—into the domain of gains, the domain of losses, or the domain of slim possibilities. He argues that leaders in the domain of gains are more likely to settle so as to hold onto gains they made earlier. Kimminau cites Bosnian Serb reaction to Deliberate Force as a case in point. The air campaign, and Croat and Bosnian Muslim ground offensives, threatened to erase gains Bosnian Serbs had made over the previous two years. Consequently, they decided to settle while they were still ahead.[21] Conversely, leaders who see themselves as being in the domain of losses are more willing to take risks and resist coercion as they pursue their objectives. He characterizes Saddam Hussein as being in this position during the Coalition air offensive. Having taken a beating from the air, but still in control of Kuwait, Saddam was willing to balance the risk of further losses with the possibility that his army might inflict heavy casualties on the Coalition and thus allow him to hold onto Kuwait or bargain for some other advantage.[22] Finally, he asserts that leaders in the domain of slim possibilities will be the most likely to take risks and hold on even when rational thought would tell them to concede. The Axis powers in 1945 are examples.[23]

Kimminau's analysis provides critical insights into requirements for planning air coercion strategies. Most important is that we must do more than analyze targets and influence mechanisms in order to develop effective air coercion strategies. Kimminau argues that to know how best to coerce adversaries, we have to understand how they frame a problem; whether they believe they can quit while they're ahead or feel

compelled to hold out and hope for a favorable outcome. When we combine this with a detailed analysis of how striking certain targets produces coercive mechanisms that influence an adversary leader's decision-making calculus, we have a methodology that offers a depth of understanding beyond that conveyed by earlier coercion theories. With this in mind, it is time to look at air coercion strategies in the context of the air pressure campaign during the Korean War and Operation Deliberate Force over Bosnia.

Chapter 3

The Air Pressure Strategy in the Korean War

*We face an enemy we cannot hope to impress by words, however eloquent,
but only by deeds—executed under circumstances of our own choosing.*

—President Dwight D. Eisenhower

Background

The Cold War heated up considerably when North Korea invaded its southern
neighbor on 25 June 1950. United Nations forces, led by the United States, halted the
North Korean advance around the Pusan Perimeter and counterattacked with an
amphibious landing at Inchon and a breakout from Pusan. UN forces surged north and
appeared victorious as they approached the Yalu River late in 1950. Then, in a surprise
move, Chinese troops attacked the dispersed and exhausted UN forces, driving them back
into South Korea. Seoul changed hands twice more before the battle lines stabilized
close to the 38th parallel. Because President Truman did not want to risk a wider war
with China and the Soviet Union, he decided to limit the scope of UN military operations
to maintaining control of the South. By mid-1951, both sides had agreed in principle on
an armistice, with one very important sticking point: the repatriation of POWs.

The disagreement about POW repatriation centered on the communists' refusal to
let POWs choose whether to be repatriated to their own countries. Most Chinese POWs

opposed repatriation and sought to stay in South Korea or emigrate to another country. This sticking point caused the conflict, now a static war of attrition, to drag on through 1952. Dwight Eisenhower won the 1952 presidential election with, among other things, his pledge to end the war. Although he refused to consider a major offensive or nuclear weapons outright, he made it clear in National Security Council meetings and press conferences that he would consider all options if the communists kept stalling.[24]

Eisenhower viewed the issue of obtaining an armistice agreement as one of coercion. Although the ends he sought (an armistice) were limited, he employed a wide range of means, including air coercion, to convince communist leaders that the costs of intransigence would outweigh any gains. To maximize the effectiveness of their coercion strategy, Eisenhower and his Secretary of State, John Foster Dulles, made several comments to leaders from communist and neutral countries. In May 1953, Dulles told Indian Prime Minister Nehru that failure at the armistice talks would prompt the US to increase the intensity and scope of military operations. India's foreign minister relayed this to the British high commissioner, warning that such a failure would cause the US to "break off the negotiations and have recourse to dramatic action." General William Harrison, the chief UN negotiator, also told his opposite number, General Nam Il, that US patience was at the breaking point, and that a wider conflict was imminent.[25]

Interestingly, the communists began softening their position *before* these warnings.[26] This raises a key question: If they were already anxious to negotiate, what brought about the change, and why were they willing to settle by late May? The historical record suggests several factors, including Stalin's death in early March, communist war weariness, and greater pressure from air operations. Eisenhower and

18

Dulles pointed also to threats to use nuclear weapons. However, nuclear coercion probably was not central to swaying the communists.[27] Rosemary Foot argues that "it would have been more plausible for the US administration to argue that it was a combination of military, political, and economic factors that finally tipped the balance and convinced the Chinese to capitulate over their prisoners of war."[28] Foot instead points to war weariness as a key factor. The North Korean economy was in tatters, and the attacks on irrigation dams, addressed below, threatened major food shortages. The Chinese were also feeling economic pain. In 1951, military spending absorbed 48 percent of their total budget. By 1953, they were anxious to re-direct their energies to rebuilding China's economy, ravaged by World War II and their own civil war.[29]

Devising the Air Pressure Strategy

To break the deadlock, UN military leaders agreed in May 1952 that an air pressure strategy could play a role in compelling Red leaders to reach an agreement. It centered on four elements: stepped-up interdiction; more attacks on strategic targets; bringing MiG-15 pilots to combat on terms favorable to F-86 pilots; and attacks on irrigation dams. These actions, all part of a larger coercion strategy with a full-court diplomatic press, sought to make the costs of continued fighting prohibitive for Red leaders.[30]

The purpose of stepped-up interdiction was to raise the level of economic pain. Key here is the fact that UN air forces improved steadily from mid-1952 to early 1953. Night attacks, using radar-equipped B-26 bombers also equipped with spotlights, improved as enhanced radar, better training, and more aircraft combined to increase effectiveness.[31] Vehicle kills of 2,500-3,000 per month, and locomotive kills in the

19

dozens, increased the costs of the Red war effort. North Korean propaganda, which until March 1953 decried mass destruction from "terrorist" air attacks, changed its tune in March, claiming that UN air attacks were ineffective, a sure sign that they were painful.[32]

Along with interdiction, attacks on strategic targets increased. Since July 1952, B-29 bombers had conducted several devastating raids on Pyongyang.[33] When the communists again balked at signing an armistice in April, UN aircraft destroyed the Suiho hydroelectric dam, which supplied much of the power for Chinese industry in Manchuria.[34] Of equal note, logistics and training improvements nearly doubled B-29 sorties in the war's last year and also improved bombing accuracy.[35]

As interdiction and strategic attacks continued, UN airmen began Operation Moolah, which offered a cash reward of $50,000 to MiG-15 pilots who defected with their aircraft. On 26 April 1953, B-29s dropped a million leaflets over the Yalu, while radio broadcasts also made the offer.[36] This effort sought to increase communist fears about the reliability of their pilots, force a withdrawal of unreliable pilots from MiG-15 squadrons, and prompt pilots to defect. This PSYOPS plan worked. Soviet MiG-15 pilots—the best on the Red side—rarely appeared after April.[37] Because the communists were determined to contest UN air superiority close to the Yalu, they continued to fly MiG-15s, but with less-capable Chinese and North Korean pilots. From 1 May to 27 July, F-86 pilots made 165 MiG-15 kills at a cost of three Sabres.[38] This rout was a stinging defeat for communist leaders, and it led to lower losses and increased effectiveness for UN strike aircraft. Eisenhower then stated publicly that he did not understand why Truman had prohibited "hot pursuit" by Sabres over the Yalu. When combined with many cases of "hot pursuit" in early 1953, this likely increased Red fears

that he might support "hot pursuit" officially.[39] Hard on the heels of Moolah, air strikes began on irrigation dams.

In late 1952, air planners realized that strikes on selected dams could cause major damage.[40] Eisenhower's determination to end the fighting facilitated a strike against Toksan dam on 13 May 1953, followed by attacks on Chasan dam on 15/16 May. Both attacks succeeded. Once Toksan dam was breached, the resulting flood washed out six miles of railroad embankment and five bridges, two miles of highway, and 700 buildings. It also destroyed five square miles of rice crops.[41] The attack on Chasan had similar effects. Although the North Koreans countered by lowering water levels in other dams to forestall another catastrophe, this was costly because it deprived rice fields of water.[42]

Why the Air Pressure Strategy Succeeded

The air pressure campaign was a successful use of air coercion *in conjunction with other instruments of power*. Communist leaders had reached the point of diminishing returns and recognized that any benefit to be gained by demanding a favorable POW-exchange process would be outweighed by the cost. They must also have feared the implications of Eisenhower's threats to increase the war's intensity.[43]

The air pressure campaign was built around an analysis of what communist leaders valued and feared. While we cannot know exactly why they gave in, the evidence indicates air coercion played a role. Communist conciliation began at the end of March 1953 and led to an armistice agreement in late May. The timing of heavier interdiction and raids on strategic targets (late 1952), Operation Moolah (April 1953), and attacks on the dams (mid-May 1953) is significant. Chinese leaders, still in the domain of gains, probably recognized that continued fighting would erode their gains and cause them great

economic hardship. With air attacks and diplomatic pressure intensifying, they likely decided to quit while they were ahead.[44] Attacks on the dams probably pushed North Korean leaders, already in the domain of losses, to go along. Finally, and critical in analyzing the success of air coercion, both sides kept negotiating, reminding us that coercion strategies must give both sides room to find common ground.

Notes

[1] Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca, NY: Cornell University Press, 1996), 328.

[2] Colonel Maris McCrabb, "US and NATO Doctrine for Campaign Planning," in *Deliberate Force*, edited by Colonel Robert C. Owen (Maxwell AFB, AL: Air University Press, 2000), 79.

[3] Pape, *Bombing to Win*, 8.

[4] Ibid., 59-86.

[5] Ibid., 10. Pape thinks strategic bombing campaigns have always been ineffective means of coercion.

[6] Ibid., 66.

[7] See Jon Kimminau, *The Psychology of Coercion: Merging Airpower and Prospect Theory* (Maxwell AFB, AL: Air University Press, 1998), 27-28, for a more detailed explanation of risk.

[8] Pape, *Bombing to Win*, 10.

[9] Ibid., 19.

[10] Ibid., 213.

[11] Ibid., 80.

[12] Ibid., 80-81.

[13] See Schelling, *Arms and Influence*, 3-4, for a closer look at this issue.

[14] See Lt Col Peter Wijninga and Richard Szafranski, "Beyond Utility Targeting: Toward Axiological Air Operations," *Aerospace Power Journal,* (Winter 2000, Vol.14, no. 4)*:* 45-59, for additional insights.

[15] Col Christopher M. Campbell, "The Deliberate Force Air Campaign," in *Deliberate Force*, edited by Colonel Robert C. Owen (Maxwell AFB, AL: Air University Press, 2000), 123.

[16] Mark P. Sullivan, *The Mechanism for Strategic Coercion: Denial or Second-Order Change?* (Maxwell AFB, AL: Air University Press, 1995), 21.

[17] Ibid., p. 29.

[18] Ibid., p. 57.

[19] Jon Kimminau, *The Psychology of Coercion*, 27-28.

[20] Ibid., pp. 12-16.

[21] Ibid., 34-37.

[22] Ibid., 38-42.

[23] Ibid., 42-46.

Notes

[24] Rosemary Foot, *The Wrong War: American Policy and the Dimensions of the Korean Conflict, 1950-1953* (Ithaca, NY: Cornell University Press, 1985), 205.

[25] Rosemary Foot, *A Substitute for Victory: The Politics of Peacemaking at the Korean Armistice Talks* (Ithaca, NY: Cornell University Press, 1990), 165.

[26] Ibid., 167.

[27] Ibid., 181, and Roger Dingman, "Atomic Diplomacy During the Korean War." *International Security*, (Winter 1988-89, Volume 13, Number 3): 91.

[28] Foot, *A Substitute for Victory*, 181.

[29] Foot, "Nuclear Coercion and the Ending of the Korean Conflict," *International Security*, (Winter 1988-89, Volume 13, Number 3): 108.

[30] Conrad C. Crane, *American Airpower Strategy in Korea, 1950-1953* (Lawrence, KS: University Press of Kansas, 2000), 117.

[31] Robert Frank Futrell, *The United States Air Force in Korea 1950-1953*, Revised Edition (Washington, DC: Office of Air Force History, 1983), 622-623.

[32] Ibid., 627.

[33] Foot, "Nuclear Coercion," 110, and Futrell, *USAF in Korea*, 517.

[34] Crane, *Airpower in Korea*, 119.

[35] Futrell, *USAF in Korea*, 630-634.

[36] Ibid., 652.

[37] Ibid., p. 653.

[38] Ibid., p. 654-656.

[39] Foot, *Substitute for Victory*, 166; Futrell, *USAF in Korea*, 611; and Crane, *Airpower in Korea*, 165.

[40] Futrell, *USAF in Korea*, 667.

[41] Ibid., 669.

[42] Ibid.

[43] Ibid., 111.

[44] Stephen T. Hosmer, *Psychological Effects of US Air Operations in Four Wars, 1941-1991: Lessons for US Commanders* (Santa Monica, CA: Rand Corporation, 1996), 24-25.

Chapter 4

Air Coercion Comes of Age: Operation Deliberate Force

Every bomb was a political bomb.

—General Michael Ryan

Background

The collapse of Yugoslavia in 1990 resulted in a brutal war between Serbs, Muslims, and Croats for control of Bosnia Herzegovina. In 1992, when the UN Protection Force (UNPROFOR) began patrolling safe areas around Sarajevo and Srebrenica, NATO aircraft had been involved in an unsuccessful mission to keep Bosnian Serb fielded forces from violating the safe areas. The situation in Bosnia took a turn for the worse when Bosnian Serb forces overran Srebrenica in July 1995 and moved heavy weapons inside the 20-kilometer total exclusion zone around Sarajevo. Serb outrages became intolerable when, on 28 August, they fired mortar rounds from inside the total exclusion zone into a crowded marketplace in Sarajevo, killing 37 people and wounding 85. NATO leaders realized they had to act decisively to stop Bosnian Serb excesses and, if possible, compel Bosnian Serb leaders to negotiate in good faith and stop the fighting.

Unlike Korea, where ends were limited but means nearly total, Deliberate Force was waged for limited ends with limited means. NATO leaders recognized the

importance of halting Bosnian Serb excesses, but they—and particularly the Americans—viewed it as a campaign to uphold something less than vital national interests. However, they did recognize that Bosnian Serb tenacity and obstinance, as well as the high stakes involved (from both the NATO and Bosnian Serb perspective) would require a tough air campaign.

Developing the Air Campaign

From the outset, planners focused on influencing adversary leaders, including Radovan Karadzic, General Ratko Mladic, and Slobodan Milosevic, the Bosnian Serbs' patron. General Michael Ryan, the operational commander for Deliberate Force, stated specifically that the "historic Bosnian Serb fear of domination" was to be the operation's center of gravity.[1] This focus on Bosnian Serb leadership laid the groundwork for what was to be a very effective air coercion strategy. It zeroed in on what Bosnian Serb leaders feared (domination by other ethnic groups) and valued (their military capabilities), which resulted in very effective target selection. The ultimate aims of Deliberate Force included Bosnian Serb withdrawal of all forces from safe areas, removal of heavy weapons from the 20-kilometer total exclusion zone around Sarajevo, and cessation of attacks within safe areas. Also, clear but unspoken, was a desire to compel Bosnian Serb leaders to negotiate a peace agreement in good faith.[2] From the outset, NATO planners focused on target sets most likely to erode Bosnian Serb military effectiveness, making them vulnerable to Muslim and Croat counterattacks, and playing on their fear of military defeat and domination. These targets included C2, air defense, military facilities, and lines of communication.[3] By taking away Bosnian Serb military advantages, NATO leaders hoped to compel them to accept UN and NATO demands.

As in Korea, bombing was only one of several factors leading to success. Based on Serb taking of UNPROFOR hostages over the past two years, NATO began bombing only after UNPROFOR forces pulled back out of Serb reach. Offensives by Croatia in the Krajina, and by the Bosnian Federation of Muslims and Croats in Bosnia, recaptured enough territory to allow for a 51%-49% split of Bosnia between the Bosnian central government and the Bosnian Serbs' Republica Srpska. This happened to be the precise split proposed by Contact Group negotiator Richard Holbrooke.[4] NATO also used Rapid Reaction Force artillery to engage Bosnian Serb targets and tactical air control parties to maximize the effectiveness of air strikes.[5]

Why DELIBERATE FORCE Succeeded

The Bosnian Serb leadership, pummeled simultaneously on the ground by the Croats and Bosnian Federation, and from the air by NATO, did not want to lose any more ground, so they conceded. As in Korea, NATO and Contact Group leaders used a carrot as well as a stick. They agreed to several Bosnian Serb demands, including recognition of the Republica Srpska as an autonomous state within Bosnia that has "special ties" with the Former Republic of Yugoslavia (FRY).[6] The Serbs had sought this throughout the negotiations, and it helped them decide to quit while they were ahead. This is of vital importance in analyzing the success of Deliberate Force as a coercive strategy. Because they viewed themselves as being in the domain of gains—although barely given recent defeats—Karadzic and Mladic probably decided to settle while they could still get good terms. Perhaps more important was Milosevic's realization that the UN would not lift sanctions against the FRY until fighting stopped in Bosnia. This resulted in his sponsorship of the Dayton Accords. The quid pro quo was official recognition, and

26

special ties with Belgrade, for the Republika Srpska. Air coercion again succeeded *in conjunction with other instruments of power* and as a result of room for negotiation.

Due to careful planning, superb execution, and luck, Deliberate Force achieved its objectives. Holbrooke said, "never has airpower been so effective in terms of a political result."[7] Yet Deliberate Force in many ways marked the emergence of a new kind of air coercion, different from the air pressure campaign in Korea. It was a campaign built around—and hemmed in by—more political and military restrictions. General Ryan maintained close control over targets and munitions loads. His comment that "every bomb was a political bomb" rings true in this new age of limited war, when collateral damage and even adversary military casualties are frowned upon, particularly during conflicts in which less-than-vital national interests are at stake.[8] During negotiations, Milosevic admitted that air strikes killed only 25 Bosnian Serbs, a tiny total given the scope and intensity of the campaign.[9] That General Ryan and his civilian bosses planned and conducted the air campaign with casualties very much in mind is instructive. Air planners focused on policy objectives, and on what Bosnian Serb leaders valued and feared, and chose targets accordingly. They also analyzed how striking these targets would yield coercive mechanisms to influence Serb leaders. Their strategy worked.

Notes

[1] Campbell, "Deliberate Force Air Campaign," 123.
[2] Ibid.
[3] Ibid., 109.
[4] Maj Mark C. McLaughlin, "Combat Assessment: A Commander's Responsibility," in *Deliberate Force*, edited by Col Robert C. Owen (Maxwell AFB, AL: Air University Press, 2000), 194-195.
[5] Lambeth, *Transformation of American Air Power*, 173.
[6] McLaughlin, "Combat Assessment," 195.
[7] Ibid., 194.

Notes

[8] Col Robert C. Owen, Editor, *Deliberate Force*, (Maxwell AFB, AL: Air University Press, 2000), 485.

[9] Lt Col Mark J. Conversino, "Executing Deliberate Force, 30 August-14 September 1995," in *Deliberate Force*, edited by Col Robert C. Owen (Maxwell AFB, AL: Air University Press, 2000), 161.

Chapter 5

Where Does Air Coercion Go from Here?

In essence, air power is targeting, targeting is intelligence, and intelligence is analyzing the effects of air operations.

—Colonel Phillip Meilinger

Air coercion is a strategy whose time has come. The absence of a peer competitor in the near term, and the burdens of being the world's greatest power, with unique military capabilities, will drive America's involvement in wars where less-than-vital national interests are at stake. In most of these conflicts, the imperative will be to achieve policy objectives with little expenditure of blood or treasure. Airpower, with its potential to deliver decisive results fast and at relatively low cost, is a means of doing so. This became clear in Korea, was very evident during Deliberate Force, and has continued with Allied Force. Despite a shaky start, this most recent of air coercion efforts acts as a prism through which to view many of the key points raised in previous chapters.

Most striking about Allied Force was its abject failure to achieve NATO's initial military objectives. Clearly, NATO air planners failed to ask basic questions: what do adversary leaders value and fear, and which targets, once struck, would most influence them to accede to NATO's demands? Despite the centrality of Serb leaders, planners treated them as a secondary target set, instead focusing on Serb fielded forces. Planners thus *chose the wrong primary focus*. They also overlooked the difficulty of attacking

Serb forces from the air and underestimated Serb leaders' resolve. Recognizing that policy issues imposed limits, the strategy nonetheless went badly awry. NATO eventually compelled Milosevic to settle, but only after shifting to different target sets.

A recent study of the reasons Milosevic acceded to NATO's demands arrives at some key conclusions.[1] The first is that *bombing produced a political climate conducive to concession*. By bringing unbearable pressure to bear on Serb leaders, the air campaign compelled them to settle. Serb political elites played a key role in pressuring Milosevic, and they applied that pressure only after NATO targeting efforts focused explicitly on causing them economic and political pain. The political elite, who saw their homes and businesses literally going up in smoke, played a key role in convincing Milosevic to settle. They were in turn influenced by the public mood, which turned decidedly ugly once NATO began bombing dual-use economic and infrastructure targets. Milosevic and his cronies no doubt feared the possibility of an uprising and their ouster. Consequently, bombing *created growing pressures within the regime to compromise*. This is a useful reminder of the role private and public pressure can play in influencing leaders, particularly in countries with developed economies and a tradition of political activism.

Also important is the fact that *Milosevic expected unconstrained bombing* if he rejected NATO's terms, which would have destroyed the FRY's economic infrastructure and, as noted earlier, likely precipitated his ouster. The study also points to Milosevic's *fear of a ground invasion* as a contributing factor. Interestingly, the study characterizes the threat of ground invasion as a minor factor in Milosevic's decision to yield. However, given his clear interest in—and fear of—NATO ground involvement, this factor appears to have received too little weight. It also obscures the important role

ground forces can play in military coercion, an issue that has itself received far too little attention to date.[2]   Finally, the study concludes that *NATO's terms provided Milosevic with political cover*. This speaks to the fact, addressed in previous chapters, that coercion cannot succeed if there is no room for negotiation and compromise.

These key findings from Allied Force speak directly to issues, raised in this paper, that are at the heart of air coercion theory and must also inform its practice. Planners must make adversary leaders the primary focus of air coercion and choose specific targets only after careful deliberation about what leaders value and fear. To do so, they must understand why and how attacking these targets will influence adversary leaders; in other words, the precise means by which attacking a target will trigger a coercive mechanism that gives us leverage against adversary leaders. Perhaps even more important, they must also have the wisdom and moral courage to recognize when air coercion is not likely to be an effective strategy. There are situations in which we may not be able to influence adversary leaders effectively from the air. Recognizing those occasions, and making them clear to senior leaders, is every bit as important as advocating air coercion strategies that are likely to succeed. If air planners can do this, and if they remember the truism that airpower is targeting, targeting is intelligence, and intelligence is *analyzing the effects of air operations, both before and during execution*, air coercion will continue to develop as a key strategy option for the United States.

Notes

[1] Stephen T. Hosmer, *Why Milosevic Settled When He Did* (Santa Monica, CA: The Rand Corporation, 2000), xiii-xviii.
[2] See Maj Michael H. McMurphy, "Coercion and Land Power" (Fort Leavenworth, KS: Army Command and General Staff College, 2000) for insights on using ground forces in coercion strategies.

31

Bibliography

Beale, Maj Michael O. *Bombs over Bosnia: The Role of Airpower in Bosnia-Herzegovina.* Maxwell AFB, AL: Air University Press, 1997.

Brodie, Bernard. *War and Politics.* New York: MacMillan Publishing Company, 1973.

Byman, Daniel L., Matthew C. Waxman, and Eric Larson. *Air Power as a Coercive Instrument.* Santa Monica, CA: Rand Corporation, 1999.

Campbell, Col Christopher M. "The Deliberate Force Air Campaign." In *Deliberate Force: A Case Study in Effective Air Campaigning,"* edited by Col Robert C. Owen. Maxwell AFB, AL: Air University Press, 2000.

Clausewitz, Carl von. *On War.* Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1976.

Clodfelter, Mark. *The Limits of Airpower: The Bombing of North Vietnam.* New York: Free Press, 1989.

Conversino, Lt Col Mark J. "Executing Deliberate Force, 30 August-14 September 1995." In *Deliberate Force: A Case Study in Effective Air Campaigning,"* edited by Col Robert C. Owen. Maxwell AFB, AL: Air University Press, 2000.

Crane, Conrad C. *American Airpower Strategy in Korea, 1950-1953.* Lawrance, KS: University Press of Kansas, 2000.

Dingman, Roger. "Atomic Diplomacy During the Korean War." *International Security*, Winter 1988-89, Volume 13, Number 3, 50-91.

Faber, Peter R. *Joint Airpower as Vicious Diplomacy: A Second Look.* Newport, RI: Naval War College, 1997.

Foot, Rosemary. *A Substitute for Victory: The Politics of Peacemaking at the Korean Armistice Talks.* Ithaca, NY: Cornell University Press, 1990.

Foot, Rosemary. "Nuclear Coercion and the Ending of the Korean Conflict." *International Security*, Winter 1988-89, Volume 13, Number 3, 92-113.

Foot, Rosemary. *The Wrong War: American Policy and the Dimensions of the Korean Conflict, 1950-1953.* Ithaca, NY: Cornell University Press, 1985.

Futrell, Robert Frank. *The United States Air Force in Korea, 1950-1953.* Revised Edition. Washington, DC: Office of Air Force History, 1983.

George, Alexander L., and William E. Simons. *The Limits of Coercive Diplomacy.* Boulder, CO: Westview Press, 1994.

Hosmer, Stephen T. *Psychological Effects of US Air Operations in Four Wars, 1941-1991: Lessons for US Commanders.* Santa Monica, CA: Rand Corporation, 1996.

Hosmer, Stephen C. *Why Milosevic Decided to Settle When He Did.* Santa Monica, CA: Rand Corporation, 2001.

Kimminau, Maj Jon A. *The Psychology of Coercion: Merging Airpower and Prospect Theory.* Maxwell AFB, AL: Air University Press, 1998.

Lambeth, Benjamin S. *The Transformation of American Air Power*. Santa Monica, CA: Rand Corporation, 2000.

McCrabb, Col Maris. "US and NATO Doctrine for Campaign Planning." In *Deliberate Force: A Case Study in Effective Air Campaigning,"* edited by Col Robert C. Owen. Maxwell AFB, AL: Air University Press, 2000.

McEldowney, Nancy. "Kosovo: Redefining Victory in an Era of Limited War." Washington, DC: National Defense University, National War College, 2000.

McLaughlin, Maj Mark C. "Combat Assessment: A Commander's Responsibility." In *Deliberate Force: A Case Study in Effective Air Campaigning,"* edited by Col Robert C. Owen. Maxwell AFB, AL: Air University Press, 2000.

McMurphy, Maj Michael H. *Coercion and Land Power*. Fort Leavenworth, KS: United States Army Command and General Staff College, 2000.

Meilinger, Col Phillip S. *Ten Propositions Regarding Air Power*. Maxwell AFB, AL: Air Force History and Museums Program, 1995.

Owen, Col Robert C. *Deliberate Force: A Case Study in Effective Air Campaigning*. Maxwell Air Force Base, AL: Air University Press, 2000.

Pape, Robert A. *Bombing to Win: Air Power and Coercion in War*. Ithaca, NY: Cornell University, 1996.

Schelling, Thomas C. *Arms and Influence*. New Haven, CT: Yale University Press, 1966.

Schelling, Thomas C. "The Diplomacy of Violence." In *International Politics: Anarchy, Force, Political Economy, and Decision-Making*. Second Edition. Edited by Robert J. Art, Boston, MA: Little, Brown, and Company: 1985.

Sullivan, Maj Mark. *The Mechanism for Strategic Coercion: Denial or Second-Order Change?* Maxwell AFB, AL: Air University Press, April 1995.

Wijninga, Lt Col Peter, and Richard Szafranski, "Beyond Utility Targeting: Toward Axiological Air Operations." *Aerospace Power Journal*, Winter 2000, Volume 14, Number 4, 45-59.